

IN THE CLAIMS

The following listing of the claims represents the claims now present in this application.

This listing supersedes and replaces all prior claim listings. Please amend claims 17 and 23-24 as follows:

1. Cancelled.
2. Cancelled.
3. Cancelled.
4. Cancelled.
5. Cancelled.
6. Cancelled.
7. Cancelled.
8. Cancelled.
9. Cancelled.
10. Cancelled.
11. Cancelled.
12. Cancelled.
13. Cancelled.
14. Cancelled.
15. Cancelled.
16. Cancelled.

17. (Currently Amended) A chemical analytic apparatus which performs various kinds of processing for analyzing very small droplets chemically, including:

in a condition where magnetic ultrafine particles are mixed ~~[[to]]~~ and contained inside a droplet,

a conveyance means moving in a direction while applying a magnetic field, wherein the droplet, ~~[[to]]~~ into which said magnetic ultrafine particles were mixed, is conveyed in another liquid that differs from the droplet, while maintaining a single droplet in the another liquid, the droplet is conveyed for processing of chemical analysis, due to attraction by said magnetic ultrafine particles to the magnetic field of the conveyance means; and

a processing means by which operations for processing of chemical analysis are performed one by one in the process in which the droplet to which said magnetic ultrafine particles were mixed is conveyed by said conveyance means, wherein

plural kinds of the droplets to which said magnetic ultrafine particles are mixed and of only the droplets are provided, and said processing means ~~includes~~ is covered by thin plates at least on four side faces and a bottom face so as to be filled with the another liquid, said processing means is separated by plural bulkheads into plural small compartments separated by plural bulkheads communicating with each other, and said plural kinds of the droplets to which said magnetic ultrafine particles were mixed and of only the droplets are arranged in said small compartments, and

an optional droplet to which said magnetic ultrafine particles are mixed and which is arranged in an optional small compartment is conveyed by said conveyance means in the another liquid filled in the processing means while maintaining a single optional droplet in the another liquid, by passing through each bulkhead separating one small compartment from another, and a chemical reactive operation itself or part of the operation is performed by uniting the optional droplet with another droplet out of said plural kinds arranged in the other small compartments.

18. (Previously Presented) The chemical analytic apparatus according to claim 17, wherein when the optional droplet out of said plural kinds to which said magnetic ultrafine particles are mixed and which is arranged in an optional small compartment is conveyed to said other small compartments by said conveyance means by passing through each bulkhead separating one small compartment from another,

the optional droplet out of said plural kinds to which said magnetic ultrafine particles are mixed is separated to a droplet that includes said magnetic ultrafine particles and a droplet that does not include said magnetic ultrafine particles, by using physical and chemical characteristics such as wettability and surface tension of said optional droplet.

19. (Previously Presented) The chemical analytic apparatus according to claim 17, wherein by controlling the magnetic field which is externally applied to the droplet to which said magnetic ultrafine particles are mixed, said magnetic ultrafine particles are dispersed and cohered in the inside of the droplet, and also the operations for processing of chemical analysis of the droplet to which said magnetic ultrafine particles are mixed are performed.

20. (Previously Presented) The chemical analytic apparatus according to claim 19, wherein other than the control of said external magnetic field, at least physical and chemical reaction control by light, heat or pH is used.

21. (Previously Presented) The chemical analytic apparatus according to claim 17, wherein

in the condition where a specimen for performing chemical reactive operation adhered to surfaces of said magnetic ultrafine particles, said magnetic ultrafine particles are used as a carrier to perform the chemical reactive operation to said specimen.

22. (Previously Presented) The chemical analytic apparatus according to claim 17, wherein by combining a plurality of said small compartments which are separated by plural bulkheads and which become said processing means, at least a series of chemical reactive operation by reaction, separation and dilution to a specimen that adhered to surfaces of said magnetic ultrafine particles is performed.

23. (Currently Amended) A chemical analytic apparatus which performs various kinds of processing for analyzing very small droplets chemically, including:

in a condition where magnetic ultrafine particles are mixed [[to]] and contained inside a droplet,

a conveyance step by which a conveyance unit moves in a direction while applying a magnetic field, wherein the droplet, [[to]] into which said magnetic ultrafine particles were mixed, is conveyed in another liquid that differs from the droplet, while maintaining a single droplet in the another liquid, the droplet is conveyed for processing of the chemical analysis, due to attraction by said magnetic ultrafine particles to the magnetic field of the conveyance unit; and

processing steps by which operations for processing of chemical analysis are performed one by one in the process in which the droplet to which said magnetic ultrafine particles were mixed is conveyed by said conveyance step, wherein

plural kinds of the droplets to which said magnetic ultrafine particles are mixed and of only the droplets are provided, and the processing conditions by said processing steps are formed by a processing unit covered by thin plates at least on four side faces and a bottom face so as to be filled with the another liquid, said processing unit is separated by plural bulkheads into plural ~~[[in]]~~ small compartments ~~separated by plural bulkheads~~ communicating with each other, and said plural kinds of the droplets to which said magnetic ultrafine particles were mixed or only the droplets are arranged in said small compartments, and

an optional droplet out of said plural kinds of droplets to which said magnetic ultrafine particles were mixed and which is arranged in an optional small compartment is conveyed by said conveyance unit in the another liquid filled in the processing unit while maintaining a single optional droplet on the another liquid by passing through each bulkhead separating one said small compartment from another, and a chemical reactive operation itself or part of the operation is performed by uniting the optional droplet with another droplet out of said plural kinds arranged in the other small compartments.

24. (Currently Amended) The chemical analytic apparatus according to claim 23, wherein

when the optional droplet out of said plural kinds to which said magnetic ultrafine particles are mixed and which is arranged in the optional small compartment is conveyed to said other small compartments by said conveyance step by passing through each bulkhead separating one small compartment from another,

the optional droplet out of said plural kinds to which said magnetic ultrafine particles are mixed is separated to a droplet that includes said magnetic ultrafine particles and a droplet that

does not include said magnetic ultrafine particles, by using physical and chemical characteristics such as wettability and surface tension of said ~~optimal~~ optional droplet.

25. (Previously Presented) The chemical analytic apparatus according to claim 23, wherein by controlling the magnetic field which is externally applied to the droplet to which said magnetic ultrafine particles are mixed, said magnetic ultrafine particles are dispersed and cohered in the inside of the droplet, and also the operation of a specimen that adhered to surfaces of said magnetic ultrafine particles is performed.

26. (Previously Presented) The chemical analytic apparatus according to claim 25, wherein other than the control of said external magnetic field, at least physical and chemical reaction control by light, heat or pH is used.

27. (Previously Presented) The chemical analytic apparatus according to claim 23, wherein in the condition where a specimen for performing chemical reactive operation adhered to surfaces of said magnetic ultrafine particles, said magnetic ultrafine particles are used as a carrier to perform the chemical reactive operation to said specimen.

28. (Previously Presented) The chemical analytic apparatus according to claim 23, wherein by combining a plurality of said small compartments which are separated by plural bulkheads and which form the processing conditions by said processing steps, at least a series of chemical reactive operation by reaction, separation and dilution to a specimen that adhered to surfaces of said magnetic ultrafine particles is performed.